

# JAVA.MATH.MATHCONTEXT CLASS

[http://www.tutorialspoint.com/java/math/java\\_math\\_mathcontext.htm](http://www.tutorialspoint.com/java/math/java_math_mathcontext.htm)

Copyright © tutorialspoint.com

## Introduction

The **java.math.MathContext** class provides immutable objects which encapsulate the context settings and describes certain rules for numerical operators, such as those implemented by the **BigDecimal** class.

The base-independent settings are:

1. precision: the number of digits to be used for an operation; results are rounded to this precision.
2. roundingMode: a **RoundingMode** object which specifies the algorithm to be used for rounding.

## Class declaration

Following is the declaration for **java.math.MathContext** class:

```
public final class MathContext
    extends Object
        implements Serializable
```

## Field

Following are the fields for **java.math.MathContext** class:

- **static MathContext DECIMAL128** -- A **MathContext** object with a precision setting matching the IEEE 754R Decimal128 format, 34 digits, and a rounding mode of **HALF\_EVEN**, the IEEE 754R default.
- **static MathContext DECIMAL32** -- A **MathContext** object with a precision setting matching the IEEE 754R Decimal32 format, 7 digits, and a rounding mode of **HALF\_EVEN**, the IEEE 754R default.
- **static MathContext DECIMAL64** -- A **MathContext** object with a precision setting matching the IEEE 754R Decimal64 format, 16 digits, and a rounding mode of **HALF\_EVEN**, the IEEE 754R default.
- **static MathContext UNLIMITED** -- A **MathContext** object whose settings have the values required for unlimited precision arithmetic.

## Class constructors

S.N.	Constructor & Description
1	<b>MathContext(int setPrecision)</b> This constructor, constructs a new <b>MathContext</b> with the specified precision and the <b>HALF_UP</b> rounding mode.
2	<b>MathContext(int setPrecision, RoundingMode setRoundingMode)</b> This constructor, constructs a new <b>MathContext</b> with a specified precision and rounding mode.
3	<b>MathContext(String val)</b> This constructor, constructs a new <b>MathContext</b> from a string.

## Class methods

S.N.	Method & Description
1	<a href="#"><u>boolean equals(Object x)</u></a> This method compares this MathContext with the specified Object for equality.
2	<a href="#"><u>int getPrecision()</u></a> This method returns the precision setting.
3	<a href="#"><u>RoundingMode getRoundingMode()</u></a> This method returns the roundingMode setting.
4	<a href="#"><u>int hashCode()</u></a> This method returns the hash code for this MathContext.
5	<a href="#"><u>String toString()</u></a> This method returns the string representation of this MathContext.